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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,356	03/01/2006	Thomas Mader	10004.538	6514

7590 08/08/2007  
Jeffrey W Smith  
Smith Law Office  
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Madison, WI 53711

EXAMINER
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MCKANE, ELIZABETH L

ART UNIT	PAPER NUMBER
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1744

MAIL DATE	DELIVERY MODE
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08/08/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/531,356

Applicant(s)

MADER ET AL.

Examiner

Leigh McKane

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3 and 12-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 3, the phrase "and similar others" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "and similar others"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

As to claims 12 and 14, "the control device" lacks positive antecedent basis as no such element has been recited in claims 12 or 14 or claim 1, from which both depend.

With respect to claim 15, "the predetermined limiting value" lacks positive antecedent basis as no such value was recited in claim 1.

***Double Patenting***

3. Applicant is advised that should claim 2 be found allowable, claim 5 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-13, 18, and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merritt (US 2,915,072) in view of Coughlin et al. (US 6,423,675).

Merritt teaches a device for disinfection of milking components. The device of Merritt includes a source **120** of disinfectant, which may be chlorine, and a guiding element with which the disinfectant can be brought into contact with the milking component. See col.6, lines 54-57. The milking component can be a teat cup **47b** which is immersed within a disinfectant container **46**. See Figure 2; col.4, lines 51-53. In addition, the milking station **27** is disinfected. See col.3, lines 35-42. Furthermore, Merritt discloses circulating the disinfectant within the closed system. See col.3, lines 65-70. The system of Merritt includes a milk line **20**, a vacuum line **23**, and a milking machine **27**. As the disinfect is a liquid, it is certainly capable of being sprayed into the ambient air. Merritt further teaches a control system which controls the amount of time the

disinfectant is circulated. See col.5, line 71 to col.6, line 4. Merritt is silent with respect to use of chlorine dioxide as the disinfectant which is produced from a disinfectant base material immediately before use.

Coughlin et al. discloses clean-in-place disinfectant composition which may be used in dairy plants. See Abstract. The disinfect composition contains chlorine dioxide which may be generated from a reaction between a disinfectant base (an alkali metal chlorite) and an acid. See col.2, lines 18-23. Since Coughlin et al. teaches that chlorine is “not environmentally friendly and can form by-products with many organic substances found in the facilities being cleaned,” (col.1, lines 28-31 it would have been obvious to substitute chlorine dioxide and its precursors for chlorine in the clean-in-place system of Merritt. It is furthermore deemed obvious to choose sodium chlorite as the alkali metal chlorite, as sodium is common alkali metal.

7. Claims 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merritt and Coughlin et al. as applied to claim 1 above, and further in view of Van den Berg (EP 1230844).

Merritt does not disclose the claimed controlling limiting values. Van den Berg, however, teaches a system for cleaning and disinfecting milking parlors. The system using a control system which can activate a disinfecting routine “after a predetermined number of normal cleanings” (paragraph [0043]) or after a particular animal which may spread disease is milked (paragraph [0023]). As disclosed by Van den Berg, a computer-based control means is capable of being programmed to initiate disinfection at any point desired by the user. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the computer-based control means of Van den Berg for the circuit-based control means of Merritt for ease of programming by the user .

8. Claims 19-22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merritt and Coughlin et al. as applied to claim 1 above, and further in view of Meijer et al. (US 5,190,725).

The above combination is silent to the form of the disinfectant base. Meijer et al. discloses a composition for generation of chlorine dioxide in a liquid solution wherein there is a first disinfectant base (sodium chlorite) which is reacted with a second disinfectant base (an acid) in a solution. See col.2, lines 44-50; col.4, lines 49-62. The sodium chlorite and acid are both initially in a dry, powdered state (col.4, lines 30-35). It would have been obvious to provide the sodium chlorite and acid of the combination, in a dry, solid form as this form is easier to transport than a liquid.

9. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Merritt and Coughlin et al. as applied to claim 1 above, and further in view of Koermer et al. (US 6,440,900).

The above combination is silent to the form of the disinfectant base. Koermer et al. teaches a method for generating chlorine dioxide wherein the chlorine dioxide is generated from the reaction of sodium chlorite with an acid in solution. The sodium chlorite is provided in the form of a tablet. See col.2, lines 1-8. As Koermer et al. discloses that a tablet is a "convenient" form of sodium chlorite, it would have been obvious to use such in the combination above.

10. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Merritt and Coughlin et al. as applied to claim 1 above, and further in view of Rapson et al. (US 4,534,952).

The combination of Merritt with Coughlin is silent with respect to use of sodium chlorate to generate chlorine dioxide. Rapson et al. discloses a method of chlorine dioxide generation

from the reaction between sodium chlorate and an acid in solution. See col.2, lines 39-53.

Rapson et al. indicates that sodium chlorate and sodium chlorite are functional equivalents in the reaction to generate chlorine dioxide. For this reason, it would have been obvious to substitute one for the other in the combination *supra*.

### ***Conclusion***

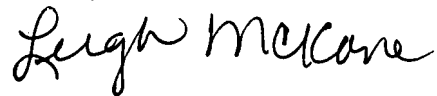
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leigh McKane whose telephone number is 571-272-1275. The examiner can normally be reached on Monday-Friday (5:30 am-2:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

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like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink that reads "Leigh McKane". The signature is written in a cursive, flowing style.

**Leigh McKane**  
**Primary Examiner**  
**Art Unit 1744**

elm  
5 August 2007